Claims

1.   An interface device connectable to a network, a computer and a storage unit, the interface device comprising:

a sequencer including a hardware logic circuit configured to process a transport layer header of a network packet,

a memory adapted to store control information regarding a network connection being handled by said device, and

a mechanism for associating said packet with said control information and for selecting whether to process said packet by said computer or to send data from said packet to the storage unit, thereby avoiding the computer.

2.   The interface device of claim 1, further comprising a SCSI controller connectable to the storage unit.

3.   The interface device of claim 1, further comprising a plurality of network ports, wherein one of said network ports is connectable to the storage unit.

4.   The interface device of claim 1, further comprising a Fibre Channel controller connectable to the storage unit.

5.   The network interface device of claim 1, further comprising a RAID controller connectable to the storage unit.

6.   The network interface device of claim 1, further comprising a file cache adapted to store said data.

7.   The network interface device of claim 1, further comprising a file cache adapted to store said data under control of a file system in the host.

8.   An interface device, connectable to a network, to a storage unit and to a host having a CPU running a file system and a protocol processing stack, the interface device comprising:

a memory having first and second portions, said first portion adapted to store a communication control block defining a network message that includes a plurality of packets containing data and control information, and said second portion adapted to cache file blocks that are stored on said storage unit, said communication control block indicating a source location and a destination location for said message such that one of said source and destination locations is disposed in said second portion of said memory, and the other of said source and destination locations is disposed on the network,

circuitry adapted to categorize headers of said packets, and

a processor adapted to associate said packets with said communication control block for sending said data to said destination without processing by the CPU.

9.   The interface device of claim 8, wherein said communication control block is created by the protocol processing stack.

10.   The interface device of claim 8, wherein said second portion of said memory is managed by the file system.

11.   The interface device of claim 8, wherein said circuitry is adapted to process a transport layer header of said headers.

12.   The interface device of claim 8, wherein said circuitry is adapted to create a summary of at least one said packets to compare with said communication control block.

13.   The interface device of claim 8, wherein said processor is configured to associate at least one of said packets with said communication control block by creating a header for said packet that is based on said communication control block and adding said header to said packet.

14.   The interface device of claim 8, further comprising a SCSI controller adapted to connect with the storage unit.

15.   The interface device of claim 8, further comprising a network port adapted to connect with the storage unit.

16.   An interface device connectable to a local computer, a network and a storage unit, the local computer having a CPU and a protocol processing stack, the interface device comprising:

a memory including a file cache for temporary storage of data being transferred between the network and the storage unit,

slow-path means for processing a first packet of a message by sending the packet to the local computer for processing by the CPU running the protocol stack, and

fast-path means for transferring a second packet of said message between the network and the storage unit without processing by the CPU.